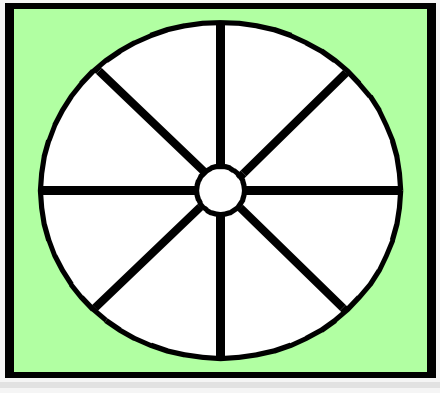
SPECTRUM®

From a p r i s m a Management Technologies

MicroMMAC-T Management Module



Supports Management Module SM-CSI1052

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Introduction

This section describes the SPECTRUM Management Module for the MicroMMAC-T.

The model type name refers to the template used to specify attributes, actions, and associations for device models in SPECTRUM. In this section, you are provided with the model type names assigned to the MicroMMAC-T in SPECTRUM.

Note:

If you are running a previous version of SPECTRUM, the following user interface aspects may differ from those in SPECTRUM version 4.0:

- Order and names of menu selections
- Navigational features (mouse button functionality)

For information about menu selections and navigating within SPECTRUM, refer to the ***SPECTRUM Menu*** documentation. .

MicroMMAC-T Management Module

The MicroMMAC-T Management Module supports all MicroMMAC-T device models managed through the SNMP advanced network management agent. SPECTRUM bases its management of these devices on the Management Information Base (MIB), which comes as part of the management module. The SPECTRUM model type name of the device is **BRtrCSIuMMACT.** The MicroMMAC-T is a Cabletron Systems Micro Multi Media Access Center (uMMAC) Multi-Port Intelligent Bridging Routing Module.

The MicroMMAC-T provides management for up to four non-intelligent stackable Token Ring hubs. The MicroMMAC-T supports one optional Bridging Routing Interface Module (BRIM) which bridges packets from one transmission type to another (e.g., Ethernet to FDDI network

backbones, Ethernet to Wide Area, etc.). Optional BRIMs are as follows:

- **BRIM-W**: Wide Area Network
- **BRIM-F**: FDDI Dual Attached Station (DAS) connection

When a BRIM is inserted into a MicroMMAC-T chassis, the icon dynamically changes from a hub icon to a bridging icon.

MicroMMAC-T Applications

The MicroMMAC-T supports both common and device-specific applications described in ***MIB II Applications***, ***Bridging Applications*** and ***Miscellaneous Applications*** documentation. SPECTRUM management of the MicroMMAC-T utilizes the following Management Information Bases (MIB's) which come as a part of the software module for the model type:

- Ct_Bridge MIB•
- Internet MIB-II (RFC 1213)
- CtChassis MIB•
- IETF Bridge MIB (RFC 1286)
- CtDevice MIB•
- RS232 MIB (RFC 1317)
- CtDownload MIB•
- DS1 Interface MIB (RFC 1406)
- Cabletron Dot5 MIB
- Cabletron Dot5 Physical MIB

RMON and DLM are also supported, and may be purchased separately. The following sections explain how to use SPECTRUM and the management module software to monitor a MicroMMAC-T.

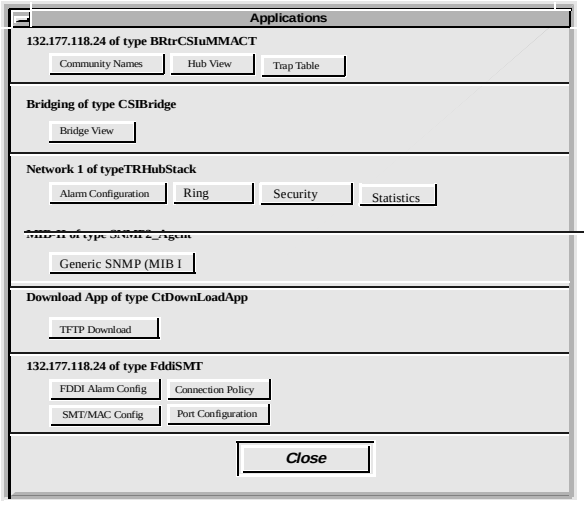
MicroMMAC-T and SPMA

SPECTRUM also provides SPMA (SPECTRUM Portable Management Application) functionality for the MicroMMAC-T. To open the SPMA Application view from any SPECTRUM view, do the following:

1. Select **Icon Subviews** from the View menu.
2. Select **Utilities** from the Icon Subviews menu.
3. Select **Applications** from the Utilities menu.

The SPMA Applications view provides buttons to select SPMA-specific views and dialog boxes. An example of an SPMA Applications view is provided below.

Figure 1: SPMA Applications View



Note: The SPMA Applications view will contain the Bridging and FDDI applications only when a FDDI BRIM is installed. Likewise, if a WAN BRIM is installed in the MicroMMAC-T, Bridging and WAN applications appear in the SPMA Applications view.

SPMA for the MicroMMAC-T is described in the ***SPECTRUM Portable Management Application for the MicroMMAC-T User's Guide***, the

SPECTRUM Portable Management Application for the MicroMMAC-T Tools Guide, and the ***Portable Management Application for the Bridge/Router Interface Modules (BRIMs) User's Guide***.

For details on the Hub view, Ring Map view, Alarm Configuration view, Statistics view, and Ring Security Configuration view, refer to the ***SPECTRUM Portable Management Application for the MicroMMAC-T User's Guide***:

- Chapter 2, *Using the MicroMMAC-T Hub View*, describes the visual display of the Hub and explains how to use the mouse within the Hub view; the operation of some basic functions available only from the Hub view are also described.
- Chapter 3, *Ring Map*, describes the Ring Map window, the Management Station Configuration window and the Ring History Information window.
- Chapter 4, *Alarm Configuration*, describes how to set and view Ring and Station alarms.
- Chapter 5, *Statistics*, describes viewing the Ring Station List, monitoring Ring and Station Statistics, and Ring and Station variables.
- Chapter 6, *Ring Security Configuration*, describes how to launch the Security Configuration Window, building the Allowed List, and adding and deleting stations from the Allowed and Disallowed Lists.

For details on the MIB I,II views, Community Names view, TFTP Download view, and Trap Table view, refer to the ***SPECTRUM Portable Management Application Tools Guide***:

- Chapter 2, *Using the MIB I, MIB II Tool*, explains how to use this tool to view and change MIB I and MIB II object ID values.
- Chapter 3, *Using the Community Names Tool*, explains Cabletron's "Component" structure of device MIBs, and describes how to change device community names.
- Chapter 5, *Using TFTP Download Tool*, explains how to upgrade firmware on Cabletron devices equipped with Flash EEPROMs.
- Chapter 6, *The Traps Table Tool*, explains how to establish which network management workstations on your network will receive trap alarms from a selected device, and also provides a brief overview of some of the traps supported by Cabletron Systems' devices.

- Chapter 7, *Using Charts and Meters*, explains how to launch charts or meters (used to analyze device statistics) from a UNIX prompt, and control the Meter Tool's display.
- Chapter 8, Configuring and Monitoring an Uninterruptible Power Supply, introduces the UPS system (which connects a computer interface port to an intelligent MIM) and explains how to start, configure, and monitor the UPS Tool.
- Chapter 9, *Using DLM*, explains how to manage "smart hub" devices, or DLM Servers, on your network. Accessing the DLM Application and its windows, adding/deleting DLM entries, and managing DLM is also described.
- Chapter 10, *Using the Path Tool*, explains how to generate a list of router hops between a managed Cabletron device and a remote destination, and display specific information about each hop found in the router path.
- Chapter 11, *MIB Tree/MIB Tools*, provides an overview of the MIB Browser, the MIB Details tool, the MIB Editor, and browsing the MIB Tree.

For details on the Bridge view, FDDI Alarm Configuration view, Connection Policy view, Station List view, SMT/MAC Configuration view, and the Port Configuration view, refer to the ***SPECTRUM Portable Management Application for the Bridge/Router Interface Modules (BRIMs) User's Guide***.

- Section 1:*General Information*

  Chapter 3, *Using the Bridge View*, describes Bridge Traffic and Detail view, details how to configure bridge parameters and describes Bridge Filtering and Special Databases.
- Section 2: *FDDI Applications*

  Chapter 4, *Viewing Port Configuration*, describes how to enable and disable BRIM ports and details other features of the Port Configuration view.

  Chapter 5, *Alarm Configuration*, details how to set alarm threshold and describes the the fields within the Alarm Configuration view.

  Chapter 6, *Viewing SMT/MAC Configuration*, describes the fields in the SMT/MAC Configuration view, the MAC Chart, and the MAC Meter.

  Chapter 7, *Configuring the SMT Connection Policy*, describes the connections allowed among the four FDDI port types: A, B, M (Master), and S (Slave).

Chapter 8, *Viewing the Station List,* details how to confugure physical ports on your BRIM, as well as how to configure PPP protocol and the Frame Relay protocol. It also describes the assignment of protocols to interfaces, and how to add circuits to the Frame Relay protocol.

Device Views

This section provides a description of the Device views for the MicroMMAC-T Management Module.

This section includes an explanation of how to use the Device views to see the interface, chassis, and physical representations of the MicroMMAC-T, access SPECTRUM generic views, and monitor performance.

Overview

The Device views can be viewed from the three perspectives described below:

- The **Logical** view displays a logical view of the MicroMMAC-T chassis, its interfaces, and the other stacked chassis. From this view you can obtain performance, configuration, and status information about the modules; the stack (e.g., Network 1); and the ports.
- The **Interface** view displays a logical view of the MicroMMAC-T's interfaces and provides access to information on their performance, status, and configuration.
- The **Physical** view displays a graphical representation of the device and its stack. This view provides access to module information only.

The **Device** views show the MicroMMAC-T's settings. When these settings are modified, the display reflects those changes after the model's next polling cycle.

Logical Device View

Access: *From the MicroMMAC-T device icon, select* ***Device > Logical*** *from the* ***Icon Subviews*** *menu.*

The MicroMMAC-T Logical Device view, which displays a logical representation of each module in the stack, allows the user to access views for the modules and ports of the MicroMMAC-T.

The Logical Device view has several fields that provide access to information about the module, the repeater stack, bridging, and the ports. Also, each representation of a port includes a gauge,

which dynamically changes to display changes in traffic over that port as it occurs. Figure 2 displays the fields in the MicroMMAC-T Logical Device view.

Figure 2: MicroMMAC-T Logical Device View

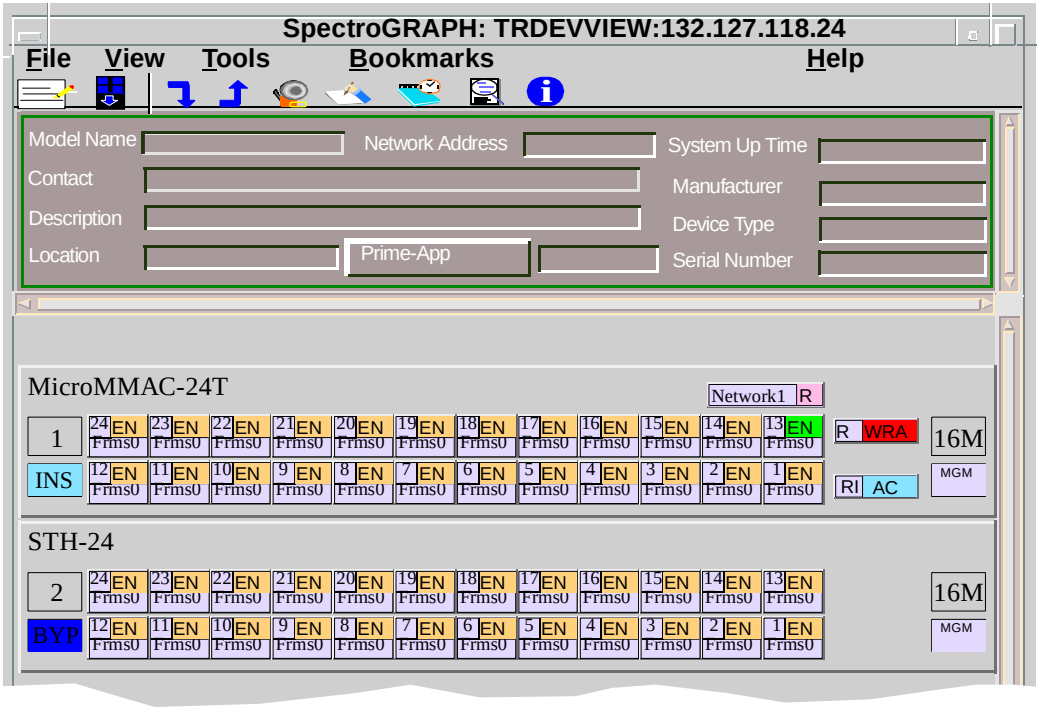
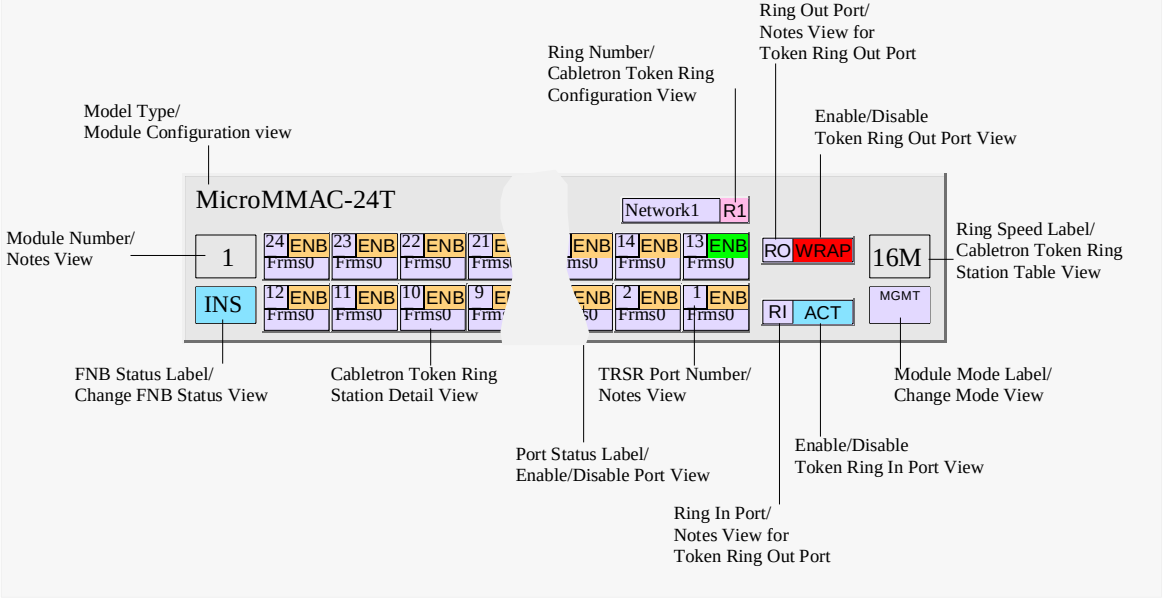


Figure 3 provides a magnified view of the fields in the MicroMMAC-T Chassis Device view. Their related menus are described after the diagram.

Figure 3: Magnified Portion of MicroMMAC-T Logical Device View



MicroMMAC-T Logical Device View Icon Subviews

Access the following views either by accessing the Icon Subviews menu for the module or by double-clicking on the appropriate parts of the module icon.

Module Notes View
Allows you to write and save notes concerning the highlighted module.

Module Configuration View
Allows you to specify the Module Mode and Ring Speed for the module. The Module Configuration view also allows the user to `Enable` or `Disable` All Station Ports, All Ring Ports, and All Module Ports.

Change FNB Status
Allows you to `Enable` or `Disable` the FNB Status.

Change Module Mode
Allows you to choose `Management` or `Auto` for the highlighted module's mode.

Enable All Station Ports
Allows you to `Enable` or `Disable` all station ports.

Enable All Ring Ports
Allows you to `Enable` or `Disable` all of the Ring Ports.

Stack Icon Subviews

Stations
Opens the Cabletron Token Ring Station Table view. For more information about this view, please refer to the section, *The MicroMMAC-T Network 1 Application*.

Configuration
Opens the Cabletron Token Ring Configuration view. For more information on the Cabletron Token Ring Configuration view, please refer to the Section, *Configuration Views*.

Stack DevTop
Opens the DevTop view for the MicroMMAC-T hubstack. For more information on the DevTop view, please refer to the ***SPECTRUM Views*** documentation.

Station Errors
Opens the Cabletron Token Ring Isolating Errors view. For more information about this view, please refer to the Section, *The MicroMMAC-T Network 1 Application*.

Stack Model Information
Opens the Model Information view for the MicroMMAC-T. For more information on the Model Information view, please refer to the ***SPECTRUM Views*** documentation.

Stack Performance
Opens the Performance view for the MicroMMAC-T. For more information on the Performance view, please refer to the ***SPECTRUM Views*** documentation.

Ring Port Icon Subviews

Port Notes
Opens the Notes view for the highlighted Ring Port. The Notes view allows you to write and mail notes concerning the Ring Port.

Port Configuration View
Opens the Ring Port Configuration view, allowing you to view and set configuration settings for the highlighted Ring Port.

Enable/Disable Ring Port
Allows the user to `Enable` or `Disable` the Ring In/Out port.

Bypass Ring Ports
Allows the user to choose `On`, `Off`, `NotApplicable`, or `Illegal` for the Bypass Ring Port status for the MicroMMAC-T.

Station Port Icon Subviews

Port Notes
Opens the Port Notes view, allowing you to write notes and email concerning the highlighted station.

Port Configuration
Opens the Station Port Configuration view, which displays characteristics of the highlighted station. For more information on this view, please refer to the section, *Configuration Views*.

Port Station MAC Address
Opens the Port Station MAC Address view, which displays the module and port numbers for the station port and allows you to enable or disable Port-to-Station Mapping.

Enable/Disable Port
Opens the Enable/Disable Port dialog box, allowing you to change the status for the highlighted port.

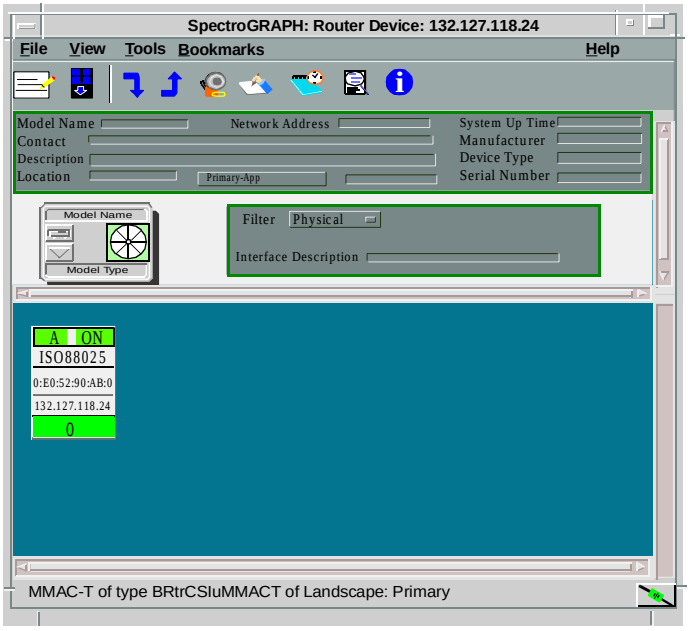
Interface Device View

Access: *From the MicroMMAC-T device icon, select* ***Device > Interface*** *from the* ***Icon Subviews*** *menu.*

This section describes the module information available from the Interface Device view, which displays a Device Icon Panel, an Interface Options Panel, and a Logical Interface icon. Access the Interface Device view by selecting **Device** from the Icon Subviews Menu or double-click the Device view button.

The Interface Device view includes three panels as well as the Device view Banner shown in Figure 4.

Figure 4: Interface Device View



Device Icon Panel

The Device Icon panel displays the MicroMMAC-T Location view icon. For more information on the Location view icon, please refer to ***SPECTRUM Icons***.

Interface Options Panel

The Interface Option panel area of the Device view allows you to modify the presentation of the Logical Interface icon. It provides the fields described below as well as access to the Gauge Control Panel view.

Filter

The Filter area of the Interface Options panel is only implemented if the SPECTRUM Routing Services Management Module is loaded.

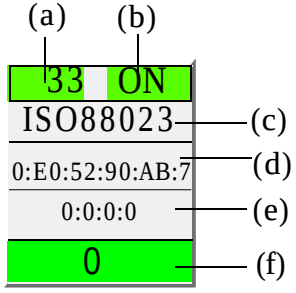
Network Information

The Network Information area of the Interface Options panel allows you to determine the interface information displayed in the Network Information Label zone of that interface's Logical Interface icon. Possible selections are ADDRESS, NAME, or MASK.

Interface Description

Selecting an Interface icon displays the type of interface in the Interface Description area of the Interface Options panel.

Figure 5: Logical Interface Icon



a Interface Number Label

b IF Status Label

c Interface Type Label

d Physical Address Label

e IP Address Label

f Gauge Label

Interface Number Label

This label displays the interface number.

IF Status Label

This label displays the current Operational Status of the interface (see Table 1). Note that the background color of the label also depends on the interface's current Administrative Status, which is set by the user (see *Interface Status View* on Page 19). This view can be accessed by double-clicking the label.

Table 1: Interface Status Label Colors

Color	Operational Status	Administrative Status	Label Text
Green	ON	ON	ON
Blue	OFF	Ot t	Ot t
Yellow	OFF	ON	Ot t
Red	Testing	t t t t	t t t t

Interface Type Label

Table 2 identifies the type of interface—e.g., Ethernet, FDDI, Other, etc. Double-click this label to access the *Secondary Address Panel* (Page 20).

Table 2: Interface Types for the MicroMMAC-T

Interface Type	Description
other	None of the following
regular1822	Regular 1822
hdh1822	HDLC Distant Host protocol
ddn-X25	Defense Data Network X.25
rfc877-x25	RFC877 X.25
ethernet-csmacd	Ethernet CSMA/CD
iso88023-csmacd	ISO CSMA/CD
iso88024-tokenRing	ISO token bus
iso88025-tokenRing	ISO token ring
iso88026-man	ISO man
starLan	StarLAN IEEE 802.3
proteon-10Mbit	ProNET 10 Mbps
proteon-80Mbit	ProNET 80 Mbps
HyChan	Hyperchannel
fddi	Fiber Distributed Data Interface
lapb	X.25 Line Access Procedure, Balanced

Table 2: Interface Types for the MicroMMAC-T (Continued)

sdlc	IBM Synchronous Data Link Control protocol
ds1	T1 link (USA and Japan)
CEPT	T1 link (Europe)
basicISDN	Basic Integrated Services Digital Network
primaryISDN	Proprietary Integrated Services Digital Network
propPointToPointSerial	Proprietary Point to Point Serial
ppp	Point to Point protocol
softwareLoopback	Software Loopback
eon/CLNPoverIP	Connectionless Network Protocol over IP
ethernet-3Mbit	Ethernet 3 Mbps
nsip/XNSoverIP	Xerox Network Service Protocol over IP
slip	Generic Serial Line IP
ultra	ULTRA Technologies
sip	Switched Multimegabit Data Service
frame-relay	T1 Frame relay

Physical Address Label

This label displays the physical (MAC) address of the interface. Double-click the label to open the CSI Interface Port Model Information view.

IP Address Label

This label displays the IP address for the interface. Double-click the label to open the *Secondary Address Panel* (Page 20), which allows you to change the address and mask for this interface.

Gauge Label

This label displays whichever performance statistic has been selected in the Gauge Control panel for this device's interfaces (see the ***SPECTRUM Views*** documentation for more information).

Interface Icon Subviews Menu Options

Table 3 lists the Icon Subviews menu options available for the Interface icon.

Table 3: Interface Icon Subviews Menu

Option	Opens the . . .
Detail	Interface Detail view, which displays Packet, Error, and Discard Breakdown pie charts.
IF Status	*Interface Status View* (Page 19)
Model Information	Model Information view for the selected interface (see *Model Information View* on Page 33)
IF Address Translation Table	Interface Address Translation Table view, which shows the Physical and Network address for each interface.
Secondary Address Panel	*Secondary Address Panel* (Page 20)
Thresholds	Interface Threshold view, which allows you to set the on/off alarm thresholds for load, packet rate, error rate, and % discarded.

Interface Status View

Access: *From the **Icon Subviews** menu for the Interface icon in the Interface Device view, select **IF Status**.*

This view provides information on the operational status of the interface and allows you to enable or disable the port.

Operational Status

The current state of the interface (`ON`, `OFF`, or `Testing`).

Administrative Status

This button allows you to select the desired operational state of the interface (`ON`, `OFF`, or `Testing`).

Secondary Address Panel

Access: *From the **Icon Subviews** menu for the Interface icon in the Interface Device view, select **Secondary Address Panel**.*

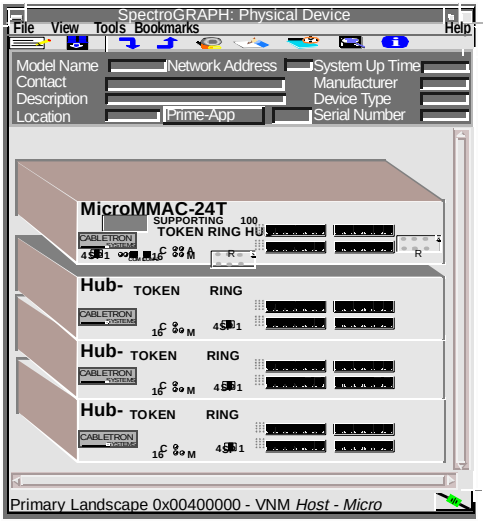
This panel provides a table of IP addresses and masks obtained from the Address Translation table within the device's firmware. You can change the current address displayed in the **IP Address** field by selecting an entry from the table in this panel and clicking the **Update** button

Physical Device View

Access: *From the MicroMMAC-T device icon, select **Device > Physical** from the **Icon Subviews** menu.*

This section describes the module information available from the MicroMMAC-T Physical Device view, which displays a physical representation of the MicroMMAC-T module and its stack. Figure 6 illustrates the MicroMMAC-T's Physical Device view.

Figure 6: MicroMMAC-T Physical Device View



For a complete description of the status LEDs, refer to the ***MicroMMAC-T User's Guide.*** Table 4 lists and describes the menu options available for the MicroMMAC-T module icon displayed in the Physical Device view.

Table 4: Physical Device View - Module Icon Menu Selections

Menu Selection	Opens the...
Module Notes	Module Notes view.
Module Configuration	Module Configuration view, allowing for module port configuration as well.
Change FNB Status	Change FNB Status view, allowing the user to choose either Insert or Bypass as the FNB status for the module.
Change Module Mode	Change Module Mode view, allowing the user to choose either Management or Auto as the module's mode.
Enable All Station Ports	Enable All Station Ports view, allowing the user to enable all of the station ports for the module.
Enable All Ring Ports	Enable All Ring Ports view, allowing the user to enable all of the ring ports for the module.

Configuration Views

This section provides descriptions of the configuration views that are available for the MicroMMAC-T.

The following views allow you to access and change configuration information for the MicroMMAC-T. The following configuration views are documented in this chapter:

- *MicroMMAC-T Device Configuration View* on Page 22
- *Module and Port Configuration Views* on Page 25

MicroMMAC-T Device Configuration View

Access: *From the MicroMMAC-T device icon, select* ***Configuration*** *from the* ***Icon Subviews*** *menu.*

The MicroMMAC-T Device Configuration view provides information on the configuration and operating status of the MicroMMAC-T.

You can access the Device Configuration view through the Icon Subviews Menu, or the icon double-click zones.

The Device Configuration view provides the following information:

Contact Status
This field indicates contact with the device has been established.

Firmware Revision
The firmware revision for the device being modeled.

Hardware Revision
The hardware revision for the device being modeled.

Component Table

Click on this button to access the SPMA Community Name Tool, which lists the MicroMMAC-T components. For detailed information about the Community Name table, please refer to the ***SPECTRUM Portable Management Application Tools Guide***.

Download Application

Click on this button to access the DownLoad application view. This view allows you to upgrade the firmware for a MicroMMAC-T from TFTP Boot or Bootp Server. For more information on this view, refer to the ***SPECTRUM Portable Management Application Tools Guide***.

Trap Table

Click on this button to access the Trap Table, which allows the user to specify and enable traps for devices with access to the MicroMMAC-T. This SPMA utility is described in the ***SPECTRUM Portable Management Application Tools Guide***.

Interface Configuration Table

The Interface Configuration table provides the following configuration information for each of the MicroMMAC-T's ports.

Number of Interfaces
Displays the number of interfaces available from this device.

Index
Displays the number of the interface.

Type
The type of hardware interface for the port. Possible interface types and a brief description of each type are shown in Table 5.

Phy Address
The Ethernet (MAC) address of the port.

Max Frame Size
The maximum frame size for the MicroMMAC-T interfaces.

Oper Status
The current operational state of this port (`Up`, `Down`, or `Testing`).

Table 5: MicroMMAC-T Interface Types

Interface Type	Description
other	None of the following
regular1822	Regular 1822
hdh1822	HDLC Distant Host protocol
ddn-X25	Defense Data Network X.25
rfc877-x25	RFC877 X.25
ethernet-csmacd	Ethernet CSMA/CD
iso88023-csmacd	ISO CSMA/CD
iso88024-tokenRing	ISO token bus
iso88025-tokenRing	ISO token ring
iso88026-man	ISO man
starLan	StarLAN IEEE 802.3
proteon-10Mbit	ProNET 10 Mbps
proteon-80Mbit	ProNET 80 Mbps
fddi	Fiber Distributed Data Interface
lapb	X.25 Line Access Procedure, Balanced

Table 5: MicroMMAC-T Interface Types (Continued)

sdlc	IBM Synchronous Data Link Control protocol
ds1	T1 link (USA and Japan)
e1	T1 link (Europe)
basicISDN	Basic Integrated Services Digital Network
primaryISDN	Primary Integrated Services Digital Network
propPointToPointSerial	Proprietary Point to Point Serial
ppp	Point to Point protocol
softwareLoopback	Software Loopback
eon	Connectionless Network Protocol over IP
ethernet-3Mbit	Ethernet 3 Mbps
nsip	Xerox Network Service Protocol over IP
slip	Generic Serial Line IP
ultra	ULTRA Technologies
sip	Switched Multimegabit Data Service
frame-relay	T1 Frame relay

Module and Port Configuration Views

The Module or Port Configuration Views provide information on the configuration and operating status of selected modules or ports. You can access the Module Configuration view from the MicroMMAC-T Chassis Device view by clicking on the module to highlight it and then selecting **Module Configuration** from the Icon Subviews menu. You can access the Port Configuration view from the MicroMMAC-T Chassis Device view by clicking on the port to highlight it and then selecting **Port Configuration** from the Icon Subviews menu.

Module Configuration View

This area of the Module Configuration view provides the following information for the selected module:

Module
The module number for the highlighted module.

Module Name
The name of the highlighted module.

Module Mode
The mode setting for the module (either Management, Auto, or Unknown).

Module Ring Speed
The operating speed of the ring (either 4 or 16 Mbps).

Module Speed Fault
Displays Fault if a station tries to connect at a ring speed different from that of the MicroMMAC-T.

Module Speed Fault Location
Displays on which of the MicroMMAC-T's ports the module speed fault was found.

Module Port Configuration

This area of the Module Configuration view provides the following port information for the highlighted port:

Station Ports ON Out Of
Displays the number of Station ports on out of the total number of Station ports on the module.

Ring Ports ON Out Of
Displays how many Ring ports are on out of the module's total number of Ring ports.

Ports OPERATIONAL Out Of
Displays how many ports are operational out of the total number of the module's ports.

Enable ALL STATION Ports
The user may enable or disable all of the module's Station ports.

Enable ALL RING Ports
The user may enable or disable all of the module's Ring ports.

Enable ALL MODULE Ports
The user may enable or disable all of the module ports.

MicroMMAC -T Network Application

This section describes the Network application in the MicroMMAC-T's Application view.

The MicroMMAC-T Network Application view allows you to view information relating to the ring in which the MicroMMAC-T is installed. This chapter lists the Icon Subviews available from the Network application icon and describes the following views:

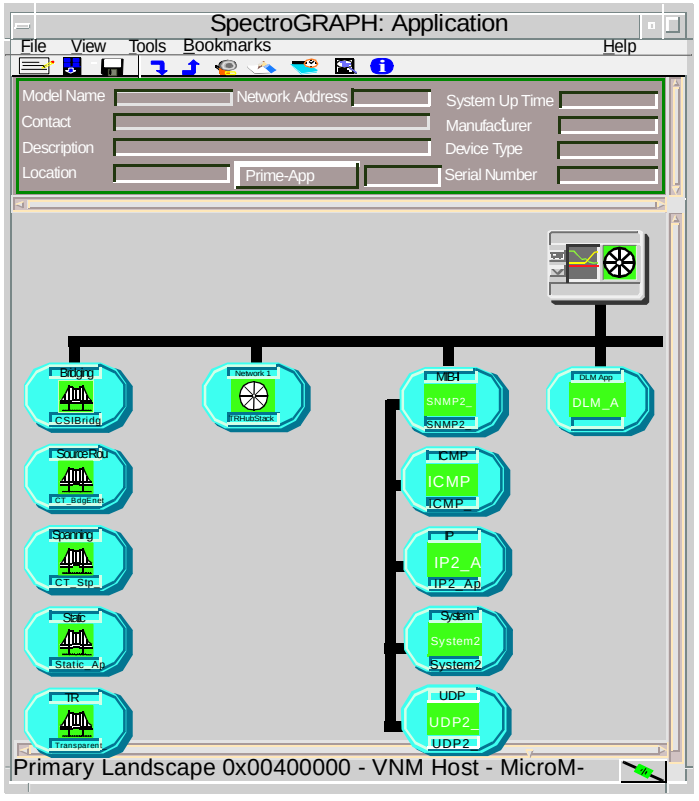
- Cabletron Token Ring Station Table view
- Cabletron Token Ring Station Isolating Errors Table view
- Cabletron Token Ring Non-Isolating Errors Table view
- Cabletron Token Ring Ring Configuration view.

The MicroMMAC-T Application View

Access: *From the MicroMMAC-T device icon, select* ***Applications*** *from the* ***Icon Subviews*** *menu.*

The Application view contains icons for all of the common and device-specific applications for the MicroMMAC-T. With the exception of the Network application, the MicroMMAC-T's applications are described in the ***Miscellaneous Applications*** documentation.

Figure 7: MicroMMAC-T Application View



The Network Application

The Icon Subviews menu for the Network 1 icon provides access to the views listed in Table 6.

Table 6: Network Icon Subviews

Menu Selection	Opens the...
Device	MicroMMAC-T Device view. For more information on the Device view, refer to the Section, *Device Views* on Page 10.
DevTop	MicroMMAC-T DevTop view. For more information on the DevTop view, refer to the ***SPECTRUM Views*** documentation.
Performance	MicroMMAC-T Performance view. For more information on the Performance view, refer to the ***SPECTRUM Views*** documentation.
Stations	Cabletron Token Ring Station Table view. More information about the Cabletron Token Ring Station Table view follows this table.
Station Errors	Cabletron Token Ring Station Isolating Errors Table view. More information about this view follows this table.
Configuration	Cabletron Token Ring Ring Configuration view. More information about this view follows this table.

Cabletron Token Ring Station Table View

Access: *From the* ***Network 1*** *application icon, select* ***Stations****.*

The Cabletron Token Ring Station Table view lists the stations connected to the ports of the MicroMMAC-T hub and provides access to other station views. The Station Table view serves as a starting point for several station management tasks.

A Device Banner appears at the top of the Station Table view, detailing information about the MicroMMAC-T device. Below this, characteristics of the ring are displayed. The values for Ring Name, Ring Number, Ring Speed, and Ring Status are included. The MAC address for the Active Monitor is shown just below the ring information, as are the access buttons for the Isolating Errors Table and the Alarms Table.

The main portion of the Cabletron Token Ring Station Table view consists of the station table itself, which lists each station connected to the MicroMMAC-T hub. Entries for each station consist of the station's address and name, number of frames passed, number of errors, and the module and port number for the station. The following buttons allow you to manipulate the station table data:

Update

Click this button to obtain the latest information for each station.

Totals/Delta

Click this button so that it shows the desired numerical display. For instance, if you want to see Frame and Error data since the station was first monitored by SPECTRUM, toggle the button so that it shows **Totals**. If you want to see the Frame and Error data since the table was last updated, toggle the button to **Delta**.

MAC/Canonical

Click this button so that it shows the desired station address format. The station addresses will be displayed either in the MAC or Canonical format.

Set Filter

Click on this button to configure or clear a filter for the chosen table field. The procedure for configuring a filter is outlined below.

Setting a Filter for Station Table Entries

1. Click on the table heading whose entries you would like to filter.
2. Click on the **Set Filter** button.

   A dialog box appears and allows you to set a filter or clear a filter. Clearing a filter will result in all stations being displayed.
3. Enter the filter in the resulting dialog box.
4. Click **OK**.

Sort Up/Sort Down/Un-sort

Click this button to organize the entries for the chosen table entries into ascending or descending order. Toggling the button so that it displays Un-sort will undo any order previously specified.

Station Detail

Click this button to access the Cabletron Token Ring Station Detail view. The Station Detail view breaks down the stations' traffic into frames and errors and displays this information in a color-coded pie chart. Two other pie charts display the Isolating Errors and Non-Isolating Errors statistics. The Station Detail view also displays the up and downstream neighbors of the station, provides access to the Cabletron Token Ring Station Alarms Configuration view (described later in this chapter), and allows you to enable a station's removal from the ring if alarm thresholds are surpassed.

Station Alarms

Click this button to access the Station Alarm Dialog box. To configure an alarm for a particular station, follow the steps below:

1. Enter thresholds for Line, Internal, Burst, A/C and Congestion errors.
2. Click on the desired button to `Enable` or `Disable` each alarm.

3 Move the stations you'd like to apply the alarm configurations to into the ***Apply Settings to:*** list by double-clicking on the station's MAC address in the ***Stations*** list or by highlighting the station's address and clicking the navigation buttons that are between the two lists.

4 Click the **Apply** button to set the alarms for the selected stations.

Remove Station

Click this button to remove the highlighted station from the ring. A dialog box will prompt you to confirm the removal of the station.

Isolating Errors Table

The Cabletron Token Ring Station Isolating Errors view, accessed via the Station Table view's **Isolating Errors** button or the Icon Subviews menu for the Network application, lists the number of Line, Burst, A/C, Abort, and Internal errors for each station on the ring. The Isolating Errors view provides access to the Non-Isolating Errors Table, via the **Non-Isolating Errors Table** button, and the Cabletron Token Ring Station Alarm Thresholds view, accessed via the **Alarms Table** button.

Non-Isolating Errors Table

Click this button to access the Cabletron Token Ring Station Non-Isolating Errors view. This table shows the number of Lost Frames, Congestions, FrameCopied, Token, and Frequency errors for each station on the ring.

Alarms Table

Click this button in any of the Station Table views to access the Cabletron Token Ring Station Alarm Thresholds view. This view lists the threshold for the Line, Burst, A/C, Internal, and Congestions errors for each station on the ring.

Cabletron Token Ring Ring Configuration View

Access: *From the **Network 1** application icon, select **Configuration** and then the **Ring Configuration** button.*

This view displays the following Ring Configuration:

- Ring Name --- Define this by highlighting the text box and entering the desired name.
- Ring Number--Read Only

- Ring Speed--Read Only
- Ring Status--Read Only
- Active Monitor--Read Only
- Active Stations--Read Only
- Beacon Recovery --You may choose `Disabled`, `Enabled`, or `Invalid` for the Beacon Recovery status.

Setting Alarms for the Ring

To set alarm thresholds for the ring, follow the steps below.

1 Enter the desired threshold for the errors listed in the view.

- Ring Purges
- AMP Errors
- Claim Token Errors
- Lost Frames
- Token Errors
- Beacon State
- Frame Count

2 Click the button next to the Threshold text box so that it displays the desired status for the alarm. (Enabled or Disabled)

3 Enter the Ring Timebase in the text box provided.

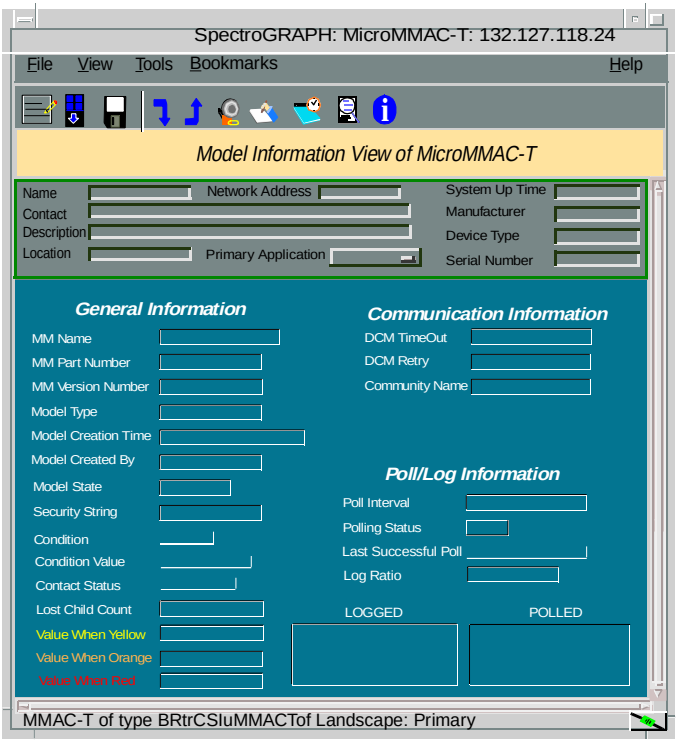
4 Choose **Save and Close** from the File menu.

Model Information View

This section provides a brief description of the Model Information views available for models of MicroMMAC-T devices in SPECTRUM.

Model Information views provide descriptive and configuration information about SPECTRUM models of individual devices, interfaces, and applications. Figure 8 shows an example of the Model Information view accessed from the **Icon Subviews** menu for the MicroMMAC-T model's Device icon. Model Information views are also available for each of the Interface icons in the Interface Device and Interface Device Topology views, and for each of the Application icons in the Application view. Although these views may vary slightly depending on the particular entity being modeled, their basic layout and content are similar for most SPECTRUM management modules. Therefore these views are described in more detail in the ***SPECTRUM Views*** documentation.

Figure 8: Model Information View



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